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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

MULLIS, JEFFREY C

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1711

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DATE MAILED: 03/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/555,672

Applicant(s)

COURT ET AL.

Examiner

Jeffrey C. Mullis

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-- Th MAILING DATE of this communication appears on the cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 6-8, 12-18, 21, 22, 24 and 28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-11, 20, 23, 25, 27 and 29-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Applicants' election of the species of claim 19 in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim 19 is allowable over the prior art.

The search has been extended to include polystyrene polyisoprene polymethylmethacrylate triblock copolymer/polystyrene compositions.

Claims 1-5, 8-11, 19, 20, 23, 25, 27 and 29-31 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

The term "semi-crystalline" renders the claims unclear since it cannot objectively be determined what level of crystallinity would be considered to be semicrystalline. This term is relative and therefore subjective.

The term "in particular" renders the claims unclear in that it cannot be determined if the claims are intended to be limited to the "particular" materials.

Claim 9 and those claims reciting connection "via an oligomer" are unclear given that the block polymer chain necessarily contains many units of monomer, a small portion of

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which could be viewed as oligomeric. At least claims 9 and 10 recite this phrase.

The term "preferably" renders the claims unclear in that it cannot objectively be determined if the claims are meant to be limited to the preferred embodiment. Furthermore any such language such as "advantageously etc. also renders the claims unclear for the same reason:

At least claim 11 is unclear since it recites "the remainder (to 100%)" despite the fact that the remainder of the claim recites other materials and the remainder of the material could not be present at levels of 100%. Any claims reciting a single component as being present at a level of a remainder to 100% are unclear since a multi-component composition necessarily could not have one component present at a level of 100%.

The term "essentially" renders the claims unclear since this word is relative and therefore subjective.

It is not clear what is intended by "surrounding the internal region in a continuous or discontinuous fashion" in that it is contradictory to say that one material surrounds another discontinuously.

Nodule or particle sizes exist in a distribution of sizes and therefore size has little meaning when unqualified as to the type of distribution i.e. weighted according to number or size etc.

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Claims 1-5, 8-11, 19, 20, 23-25, 27 and 29-31 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not describe and enable those skilled in the art to make a block copolymer such as those recited by the instant claims in which the various blocks are connected via an oligomer or an intermediate molecule. Since the specification does not describe how to produce such block copolymers including the block copolymer of claim 24, those skilled in the art could not make block copolymers connected via oligomers or intermediate molecules.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8-11, 20, 23, 25, 27 and 29-31 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Riess et al., J. Macromol. Sci. Phys., 317(2), pages 355-374, 1980.

Riess et al. disclose a blend containing polystyrene and a polystyrene-polyisoprene-polymethyl methacrylate block copolymer (Abstract). Note Figure 4 for combination with this block copolymer of polystyrene and polymethyl methacrylate. Since the polystyrene block would be expected to be compatible with polystyrene, applicants' characteristics reasonably appear to be inherent.

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

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Claim 26 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Riess et al., cited above.

With regard to claim 26, it was widely known at the time of the invention to mix macromolecular materials in the molten state with fillers which do not become molten and to cool the material in order to form blends of macromolecular materials or to form shaped objects. Therefore although Riess et al. does not disclose specifically the process of claim 26, use of such a process would have been obvious to a practitioner having ordinary skill in the art at the time of the invention in order to form shaped objects or materials having the benefit of a filler absent any showing of surprising or unexpected results.

Any inquiry concerning this communication should be directed to Jeffrey Mullis at telephone number (703) 308-2820.

J. Mullis:cdc

March 6, 2002

Jeffrey Mullis
Primary Examiner
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A handwritten signature in black ink, consisting of several overlapping loops and a long vertical stroke on the left side.